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## ABSTRACT

There is a need to expand the notion of acceptable thinking practices to include nontraditional thinking and wonder. Such an approach can help students learn to deal with ambiguity. The unique design of ambiguous thought evokes wonder, discovery, interrelationships, and new connections. Ambiguous thinking refrains from making unequivocal statements and presents a number of possibilities for the thinker to arrange or distill. To allow students to confront ambiguity and embrace uncertainty will help them deal with the ambiguity of the human condition. They will have more opportunities to relate to other human beings, to be flexible in a changing job market, and to break out of isolation and loneliness. If students are not allowed to explore, question, or wonder, they will face future jeopardy unprepared. Students should be invited to discuss how they feel about issues, and to write out their reflections. Teachers should avoid one-sided lecturing that does not allow for critical thinking response by students. Young people need to function as apprentices, who reflect, empathize, imagine, think, and talk. Examples of classroom discussions show teachers and students engaging in wondering sessions, and working toward solutions to problems. Such an "introduction to learning" can equip students with the critical ability to become educated people engaged in the process of discovery. (SG)

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## WORKING WONDER

*"You're just two-faced," Trevor accused, "it's pretty lame to only hear her side and think you know what's going on."*

*I had taken a student's point of view. I believed her. She had just recounted to the class an incident in the supermarket, where she had been accused of shoplifting some cigarettes ostensibly because of the way she was dressed. It sounded like the worst kind of stereotyping and I had immediately jumped to her defence. Trevor's ringing accusations stopped me short.*

As a class we wondered. A student is in a grocery store, with hair disheveled, hightops, crazy clothes, she is accused of taking the cigarettes in her hand—where does the responsibility lie? Who is to blame?

*Birds are dying, wildlife of all kinds are horribly threatened, people can no longer fish for a living because a tanker has spilled oil in the sound. A third mate was at the helm, the Coast Guard had lost track of the ship, the parent company had reduced staff to the minimal point and the captain was probably drinking. Who's responsible? Or, who is to blame?*

As a class we wondered. Who had what jobs? Were the jobs done well? Was there malice when jobs were not done well? Does it matter?

*A girl leaves the art building on the Auraria campus at ten o'clock p.m. Her skirt is perhaps 12" long, no longer, she wears white cowboy boots and shows lots of leg in-between. She is followed by three young men, but she hurries and arrives at her car in time to hop in and lock the doors. Some would argue she was dressed to entice. If she were attacked and raped would she be responsible because of the way she was dressed?*

As a class we wondered. What responsibility do men have to restrain themselves no matter what a woman wears?

*Leaving the Denver Center, a man in tight black leather pants is befriended by two other men. A rape ensues. Did the man in the leather pants have a responsibility to dress differently? If so, how can the two rapists be held accountable for their actions?*

As a class we wondered. Is a male rape any different than a female rape? Do dress codes ever apply? Is how I dress an issue in other places?

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## **What Is Ambiguity?**

Our culture is pocked marked with problems, some obvious, some not so obvious. Gangs, violence, poverty, homelessness, ignorance, and apathy are obvious. Lives without happy endings, hard workers laid off when slothful workers retain jobs and rapists freed by the courts are not such obvious problems. We have the chance to train our young thinkers to ascend the stairway of thinking and problem solving by moving up the conventional path one step at a time. Perhaps they will find solutions to society's economic and social problems on the approved stairways. And perhaps someone will find something of merit on the well trodden treads of time, but I wonder if Rupunzel would ever have been rescued if the Prince waited to ascend the stairs and neglected the tangled tresses. Granted, hair seems an unlikely path to the top of a tower, but it worked. Like Rupunzel's prince we need to expand our notion of acceptable thinking practices to include and applaud not only traditional linear thinking, but also non-traditional thinking and wonder. I believe only the latter approach will help students deal with ambiguity.

According to Webster, ambiguity can be thought of as "an expression, statement, or situation that can be variously interpreted." Let me suggest that wonder and non-linear thinking may foster the special kind of reasoning which allows people to appraise an idea, disagree with a judgement, debate a thought, wonder about an outcome, and know they are involved in a significant and necessary process that doesn't always have a product outcome, or a singular answer. Wonder can lead to ambiguity. Accepting ambiguity in the thinking process allows for social and private exchange, makes room for both radical ideas and time-honored truths and provides the opportunity to examine both. "[Ambiguity] entails a readiness to entertain alternatives, to examine two sides of an issue, to permit contradictory elements to coexist, the better to appreciate their differences" (Zeiger 457).

Ambiguity of thought is not a new make and model of thinking designed to "sweep the market." Yes, it corners well and is powerful but the design isn't particularly sleek and efficient, and its gas mileage is not a noteworthy feature. Ambiguous thinking is not an aerodynamic marvel used to efficiently prove, demonstrate or persuade. Rather, the unique design of ambiguous thought evokes wonder, discovery, interrelationships and new connections. Some see this type of design as cumbersome. If you value only aerodynamic, sleek, mileage-efficient thinking then you would be right in culling ambiguous thought and using a linear mode of instruction leading to only one kind of thinking.

Please follow my own ambiguous train of thought here. We began thinking about ambiguous situations, expressions or statements. Traditional, linear thinking about these situations ( I assert) usually falls short of the full

measure of possible exploration. Non-traditional, non-linear wondering about ambiguous situations leads to more ambiguous expressions, especially in our thoughts. Our thinking becomes ambiguous thinking. As we express our ambiguous thoughts we become multi-colored, multi-shaped butterflies loose in the room. The explosion of sight and sound both enrich our lives and (sometimes) confuse us. Bear with me. I want you to think more about ambiguous thinking.

I suggest that ambiguity of thought refrains from making unequivocal statements and instead presents a number of possibilities for the private or social thinker to arrange or distill. More than one logic is present, thought becomes multilogical. William Covino in his book, Forms of Wondering, suggests that "wondering, engaging in ambiguous thought" is a way to keep thinking, to examine multiple perspectives. Wondering is not to be confused with muddled thinking, the brain infused with hallucinogens, clouded and confused. Wondering/ambiguity is clear thinking without the need for solutions and definitive answers.

## **Why I Value Ambiguity.**

*"Read my paper."*

*"Why?"*

*"Tell me if it's good or bad."*

*"No."*

*"Well, tell me if it's positive or negative."*

*"That's different. Why do you really want me to read it?"*

*"'Cause if you read it and talk about it, then I don't have to think about it anymore."*

I had this conversation with a good student, one concerned to do it right, whatever "right" was. The conversation took place on October 10, 1990. I was afraid that this fine young man would spend the rest of his life trying to please someone that he thought had "the" answer.

Several months later another conversation helped me feel that perhaps dealing with ambiguity throughout the school year had begun to make inroads

on this "linear, think-it-right" mentality. The discussion topic was "Why Do People Hate?"

*"People are taught to hate."*

*"Well I think it's natural to hate."*

*"Are you ever encouraged to talk about hate? Do your folks ask you what you hate?"*

*"No, we're not suppose to hate, but we do."*

*"Why can you talk about hate with this group?"*

*"'Cause, we let each other explore ideas, we don't have to be right.-- Yeah we're working on tension." ( This brought lots of laughter.)*

*"Well I feel insecure when I think about hate."*

*"Is hate contagious?"*

*"I'm not sure if it's contagious, but I don't want to be alone with it."*

I want my students to be able to examine issues from all sides and feel safe and o.k. doing it. Learning to be comfortable with wondering and ambiguity is not something reserved for academic endeavors. It affects all arenas of life. How we learn to think in school influences our careers, marriages, and capacity to contribute to society.

Benson Snyder conducted a longitudinal study of MIT students linking two ways of thinking that poignantly portrayed the pervasive nature of linear and non-linear thinking on our lives. The study spanned nearly 30 years and involved separate cognitive literacy and numeracy skills. The students in this study fell into two predominant modes of thinking. **Mode One** thinkers wanted data that was "hard", precise and unambiguous. They dismissed anything less as unworthy of their attention. Alfred, an M.I.T. physics major spoke about his experience thus: "What we're taught here is somewhat intensive and at the same time rather narrow. And it gives a rather narrow perspective on life in general . . . the only thinking of any importance is the development of the mind. . ." (Snyder 234). Knowing was important; understanding didn't matter.



**Mode Two** thinkers expected uncertainty and did not dismiss the role of empathy and intuition in "knowing." **Mode Two** thinkers gave credence to human thought, feeling and action in an attempt to gain more understanding. This way of thinking was often scoffed at according to a **Mode Two** freshman. "I know a lot of people here just don't like humanities. They say they are useless. They scoff 'What do you need to learn that for?' They don't 'see' when they read a book; they see words. . . . They don't dig deeper for (another) purpose. I mean, even when they joke around they always have some mathematical, underlying meaning" (235).

Twenty years after the initial study Dr. Snyder again looked at the MIT class of 1965. It seems that the **Mode One** thinkers who came to grips with career expansion and successful personal relationships were found to have expanded from **Mode One** to include **Mode Two** as well. They felt that without both modes of thinking their lives both personally and professionally had little to offer. Those individuals who could not expand and who maintained an allegiance to only **Mode One** thinking found life very narrow. Careers were limited to a tight focus, while close personal relationships and general human relationship skills seem to have eluded them. Alfred, the physics major, shared this incident: "I found that my whole way of thinking . . . seems to prevent me from . . . well, reacting in any sort of a natural manner to such a situation (break-up with a girlfriend) . . . because I'm constantly analyzing myself. . . . This whole way of thinking (linear) has made it impossible for me to react" (238).

Certainly every person has the right to choose how he or she will live and think. The MIT study found that research subjects who remained **Mode One** thinkers spoke of their isolation, loneliness, and search for certainty. "They needed to have the right word, the right equation and its solution in order to feel good about themselves" (253).

As a teacher I have a chance to help my students avoid this fate. To allow ourselves to confront ambiguity and to embrace uncertainty will also allow us to deal with the ambiguity of the human condition. If we deal with the ambiguity of the human condition, we have more opportunities to relate to other human beings, to be flexible in the changing job market and to break out of isolation and loneliness.

I value wondering and I value ambiguous thinking as essential human skills that must walk side by side with precision and certainty. John, another physics major at M.I.T., suggested that using only **Mode One**, linear thinking was like "selective neglect." He decided he wanted to know what was "really

going on" and to do that he needed to combine both modes of thinking. "You need a tolerance for error so you can make it and learn from it" (239).

## **How I Teach To Promote Mode Two Thinking.**

During our wondering time John's comments (from the Benson Snyder article) became embodied in my class. From the back of the room one hand was insistently being waved as we began "wondering" together.

*"Sam what is it, what are you thinking?"*

*"This just won't work Mrs. Lustie."*

*"Why?"*

*"What if we wonder about the wrong thing?"*

Painful as that comment was, it rang true. How many times have I tried to second guess what a professor wanted me to say? The question usually posed was, "What do you think?" but re-stated the way the professor meant it, it was more accurately, "Can you guess what I'm thinking?" There wasn't room for error in "what I think." I had to have the "right" answer.

*My 13 & 14 year olds nodded in agreement with Sam's insight.*

*"It gets frustrating to try and guess what we're suppose to say, and then if we don't guess we get in trouble for not participating."*

*"Do you think sometimes you aren't participating for other reasons?"*

*"Well sure, sometimes we're just being jerks, but it seems like you let us be jerks once-in-awhile, and that seems to make it easier to say stuff. 'Cause even though you say it's OK to wonder I still feel kind of funny, some of the kids in the class might not give me permission to 'wonder'.*

*"So you're telling me that you have sort of a traffic light mentality. Somebody gives you a green or a red light for how, when and what you are "suppose" to say and share in discussion. Sometimes that person is the teacher, sometimes it's others in the class and sometimes it's yourself.*

"As we explored this issue of "traffic light" discussions most of the class felt that they were encouraged to share in discussions if their thoughts were focused on the teacher's stated purpose. As a teacher that seems fair, but the class said somebody else was generally giving the green light and they didn't like that even though they in part helped to create it. That traffic light mentality seemed arbitrary and they expressed a feeling of powerlessness and the feeling, "why bother about bringing up anything we might really care about."

*So I asked, rather naively, what question would you like to wonder about.*

*Sam was ready: "Which bathroom does a transvestite use?"*

Ambiguity can be like wild fire -- random, seemingly senseless, uncontrollable, frightening. So, for a lot of good reasons, some teachers stick to a predictable, precise, measurable kind of teaching/learning-i.e., write to find an answer; discuss to come to a conclusion; open the subject and explore the possibilities so that you can close the subject. The idea is not to "explore" thoughts, but rather to provoke action or make a decision. Exploring and interacting with ideas and textual materials takes time and training, but most of us feel barely adequate to "cover" the curriculum. If I were to suggest that teachers begin incorporating reflecting about ideas, imagining possibilities, thinking about alternatives and then talking and writing to explore these thoughts, I'm afraid some of my colleagues would feel this was another packaged program designed to "fix teachers." Wondering in the classroom is not a packaged program; it isn't for every teaching style. We can't assume, as one of my colleagues suggested, "that where two or more are gathered you will have ambiguity." Encouraging wondering is an important possibility, not a predictable program to sell.

If we work to "uncover" ideas found in the curriculum and generate new areas of thought and research we might get off track with, "who needs the set of atlases," or we might not get to the Civil War by Christmas break, or a question might lead us to explore a short story or novel that is designated curriculum for another grade level. It's no wonder that our students have little classroom experience with ambiguity -- such concepts are messy, children exploring never stay in the lines and often don't use the right colors.

Engaging students in response and exploration puts one in mind of the notion that "there may be tigers there." Yet if we do not engage our students, do not allow them to explore, question, wonder, even in the dangerous terrain of the jungle, we set them up to face future jeopardy unprepared.



## **Teaching Methodology.**

At the beginning of this essay I shared several scenarios: the girl in the supermarket, the oil spill, the possible rape, the rape. After recounting each of these incidents I had my students write in their wondering journals about responsibility and blame. The oil spill was easy to analyze. We drew a chart and saw the different types of responsibility that each party either shouldered or shrugged off. The student accused in the store evoked a bit more emotion. I told the story and the students wrote their responses before they could talk; the general consensus was that the student should have the privilege to dress any way she wished. The young lady dressed for exposure late at night on campus caused some problems. All of a sudden a majority of the students thought perhaps the minimally covered lady was not acting responsibly and she shouldn't dress however she wanted. The man in the tight leather pants blew everything apart.

"That is so gross, that just shouldn't happen." Steve said, "If I wear a shirt with a bull's eye on it people don't have the right to use me for target practice, but I guess I'd be careful where I wore it."

The class wanted some answers: "So, Mrs. L., who is responsible, who is to blame, what is the answer?" I asked them in return if I was out-of-line to engage them with issues when I didn't have an answer. Their responses reminded me why dealing with ambiguity has been such an exciting endeavor.

*"Wondering says I have to look at many sides of a story, not just one. When you told us about the girl in the supermarket I thought I really knew the situation and what I thought, but wondering has forced me to re-examine my ideas."*

*"Is that o.k., Josh, or are you kind of mad at me for upsetting what you knew."*

*"At first I was upset, now it's ok. I have a chance to look at sides of an issue I didn't even guess at before."*

*"I think we live in a society where good and bad are not black and white" Mark said, "but a solid line of gray. Wondering forces us to look at gray. My ideal is to add color so there is not black, white or gray but instead sky blue, sunkiss yellow, all the colors that have no prejudice and let all other colors live in harmony with each other."*

Mark had never said so many words together in our hearing before and the class sat breathless as his words whipped around the room and settled over us.

Would you say that we've dealt with conflict this morning?"  
There were lots of nods.

"Nobody is bloody, but you all seem to agree we've had conflicting ideas. It's been tense. Let me suggest another area where you will want to look at tension. You wrote stories last week in the computer lab that were supposed to express some lesson, or some moral, and I've enjoyed the stories a great deal. Almost all of you need to add that special thing which has kept you awake this past 30 minutes -- tension! Write the pull of this idea and that idea, like sunlight hitting a prism; you have lots of colors and light beams to follow. Add a sense of conflict to your story because of opposing ideas or issues. You'll have a story that will keep your reader awake, if for no other reason than to find out where in the world that light beam ends."

### **Teaching Theory.**

I didn't set up our wondering session because I wanted to teach tension in short stories. I had known for a week what their stories lacked and had been wondering how and when to bring them to their own time of "ah ha" about tension. More teachable moments come during our wondering sessions than during any other classroom time.

One day we talked about the random ideas that are generated during "wondering." I suggested the questions that came up reminded me of letting loose butterflies in the room, different shapes and colors, all with their own unique movement pattern. Every now and then we carefully look at a specific butterfly, and from the back of the room came, "Yeah, I like it when we stun a butterfly long enough to look at it; both sides."

### **Written Reflections.**

Another approach to our wondering time besides verbal thinking and questioning is written reflections. At certain points I'll stop the discourse and ask the students to write. Sometimes I ask questions, like "Write what you are thinking about right now". Other times I'll ask a more specific question, "If you were a legislator how would you respond to. . .?" At the end of a session

I'll give a few moments to have the class reflect in their journal and write any new questions or thoughts they have.

## **What I Hope For Because Of Mode Two Training**

I see my approach as opening students to Mode Two thinking by training them. They practice a form of thought to become more skilled at it. I have more than goals for my approach; I have hopes.

### **Minds That Are Not Endangered.**

Dr. Jane Healy in her new book, Endangered Minds, explores the concept that experience shapes brains, but interaction with the experience is necessary. Healy feels that it is this lack of interaction with experience, this idea that one-sided lecturing constitutes learning, that has led to endangered children's minds. A lecture without a critical-thinking response, Healy suggests, is as effective as the idea of teaching someone to swim by showing them a picture of a swimming pool.

How will students develop critical-thinking responses? Obviously, they will not develop responses if they aren't encouraged to respond in some way. In my experience, responses of wondering offer the best first step toward critical thinking responses. Wondering leads to exploring possible ambiguity in the experience. As the teacher becomes more skilled, she/he will sense the teachable moment, will "stun a butterfly" and help the students hone their thoughts in ways that beget precision, substance and specific insight. A critical-thinking interaction experience takes place.

"Human brains," says Jane Healy, "are not only capable of acquiring knowledge; they also hold the potential for wisdom. But wisdom has its own curriculum -- conversation, thought, imagination, empathy, reflection" (346). I would further add that anyone who lacks the chance to ponder what they have learned, who lacks the occasion to read and reflect, who lacks the forum to speak of their ideas and musings, are poorly equipped to become managers of the human enterprise.

### **Apprentice Thinkers.**

Lauren Resnick says young people need to function as apprentices. Jane Healy says young people need to reflect, empathize, imagine, think, talk. So, if I see myself as a master of my craft, a journeyman (journey person) then these two researchers have written me a prescription of what I need to be about with the apprentices in my charge. A master of his/her craft has an idea of

what skills each apprentice will need in order to also become a master. On the one hand, it seems a bit presumptuous on my part to think that our wondering session will develop students who can empathize, imagine, think and talk. On the other hand, it helps me to view my time with these kids as part of the process of "un"endangering their minds by wondering and by suggesting options as they wonder.

Several days after the question was posed about transvestites and the bathroom, Sam came to class with the answer. He received his information from another source. After he shared I asked, "How do you know your source is reliable?"

He said, "well, she is kind of a flake." I questioned the use of a fatuous source to further his idea of a right answer. Then I talked about how some people use wondering to expend mental energy and never plan to go anywhere but in a circle. I suggested, "theologians arguing about how many angels could dance on the head of a pin were, perhaps, guilty of that."

From the class came the suggestion that we could look at wondering at bit like the archeological tells we studied. We didn't know for sure about what each stratum represented but we could make suggestions and wonder based on the data that the stratum produced. And then we might have some conclusions and we might have more questions, but we wouldn't just be "horsing around". Our wondering would be meaningful.

The idea that data could substantiate our wondering provides another skill for my apprentices to take with them as they become journey persons. We can wonder in a random fashion, but if we propose some kind of premise based on our wondering then it behooves us to make certain that the statement matches the "artifacts".

Thus wondering is part of establishing a thinker's data base, a source from which to answer 'why' questions, or substantiate opinions.

## **Wondering Sessions**

Reflecting, thinking, talking and imagining happens sometimes because I'm wondering and sometimes because a student is wondering. An example of a wondering session began like this.

I brought a newspaper article about House Bill 1176, the bill that monitors what the public can say about vegetables and fruit. I asked the class

why the legislature spent time on this issue when our city had homeless people, gang violence, pollution, etc. Their thinking seemed ambiguous to me.

*"Mrs. Lustie, that's a joke, that can't be real."*

*"Oh it's real alright, but think about it from this angle. If you were in business, would you want your business to be protected, no matter what?"*

*"Oh, so maybe the issue is keeping business, and if you grow fruit or vegetables you would want a bill like this?"*

*"Yeah, but, we're suppose to be a country built on civic virtue, you know that Cincinnatus guy fought for nothing and Washington wanted to be like him and model a country like that."*

*After the proud history teacher inside me quit beaming about the fact that my students even remembered Cincinnatus and civic virtue I asked, "Do we need to re-define civic virtue? Perhaps the notion of doing good for general welfare needs to give way to doing good for only personal interest."*

From the ambiguous priorities of our elected leaders we wondered our way to a new arena of thought. We talked about civic virtue as a tenet of our society. We wondered if people with too narrow a focus should be in government. Would government work better if staffed only with people who agreed narrowly with each other? Is civic virtue an outdated concept? Is efficiency replacing virtue? As citizens of the United States, and future voters of our country, the class began to seriously consider the responsibility they had. They questioned what they valued as citizens and what it seemed was valued by our elected officials. They talked about what they would like to see done by our elected officials, what they could support and what their dreams were for their country. They reflected, imagined, thought and talked.

An example of a student-initiated session one day went something like this: "We are studying about plate movement in science and I wonder about these places that used to be and now have disappeared, like Atlantis. Our science teacher didn't want to talk about it. Could our continent just disappear?" The note of anxiety in her voice was barely disguised.

*This question led to a scientific line of questioning where several of the boys in the class were the experts. Then myths and their role in society entered the discussion and we wondered together about the myths we live with. Santa Claus, the Tooth Fairy and gravity very seldom have a chance to share a stage, but during this discussion they did and the laughter amongst the anxiety was a*



*positive indication to me that looking at some fears perhaps had been useful to the student. It was risky for me to deal with this issue because some families honor myth as sacred. Asking, "Can you trust someone who lied to you about a fat man in a red suit?" at least gave the students the chance to reflect about some vague uneasy and that is one of the important functions of wondering.*

Part of what we do in our wondering session is to "fill the tell with artifacts," find out if the wondering we've done has created a pattern. Do we now know something that we didn't know before, like the boy responding to the question "Should we talk about hate?"

"Ya!" Surprise almost illuminated every freckle. "If I look at hate and talk about it then I can do something to make it different."

He didn't know that before and the new idea was exciting. These discovered artifacts (ideas) often lead us to conclude certain truths or possible truths. We can feel comfortable with the precision of finding a truth arrived at by the ambiguity of questioning. Lauren Resnick might call this kind of wondering "coached practice." We didn't know if we were going anywhere, that didn't really matter, but we practiced anyway. We reflected, imagined, thought, wrote and talked.

Not all wondering leads us to generalizing a truth. Some days it's like there are a hundred unstable electrons careening around the room. Wondering and talking and writing about the wondering gives the student electrons a chance, but only a chance to find a stable atom.

### **What Are The Implications Of This Research?**

Phyllis Muldoon suggests in her article "Challenging Students to Think" that knowledge is not something acquired like a pet beagle. Rather, we can provide our students with the opportunity not to just acquire a data base of information, but to read, write, reflect, and discuss ideas and in so doing help them to interpret the world for themselves. This "introduction to learning" is a way to equip students with the critical ability to become educated people engaged in the process of discovery.

With these skills alive and well we have less chance to fall prey to what Emerson suggested in American Scholar:

"In the degenerated state, when the victim of society, he tends to become a mere thinker, or still worse, the parrot of other men's thinking."

Students comfortable with wondering, with exploring options not readily seen, will not be high-risk students for "parrot thinking." Students must be trained to discern the values, and assumptions of what they read, hear and experience in their lives daily.

"(This problematic situation is compounded by the) paucity of political will to address them (problems), at the apathy of the American electorate, and at the well-meaning reports on these problems now gathering dust on basement shelves.... Somehow we have constructed a society in which the connections are missing between the age's best minds and its worst problems. And we haven't merely tolerated that gap. We've actually fostered it by carefully isolating most academic research from the messy realities of the world" (Kidder B1).

As we become more of a global society the scope and immensity of issues and problems is staggering.

We must appropriate Mode Two thinking or we will collapse under the weight of these global issues. Mode One linear thinking does not allow for the diversity necessary to compete as a literate culture.

Wondering is messy. Our alternative to wondering, to fostering ambiguity, is a thinking that is turned inward upon itself, an intellectual incest. We have healthy choices, we can choose to reflect instead of regurgitate, we can imagine instead of imitate, we can become apprentice thinkers, we can talk engaging ideas instead of parroting a "canned" dialogue, we can risk and not fear--we can wonder.

## Works Cited

- Booth, Wayne. "To Those Who Do Not Teach English." The Vocation of A Teacher. Chicago: The University of Chicago Press, 1988.
- Buckley, Rosemary "From Questions To New Question: Reflections." Language Arts 65 (1988): 13-20.
- Covino, William. Forms of Wondering. Portsmouth: Heinemann, 1990.
- Healy, Jane. Endangered Minds Why Our Children Don't Think. New York: Simon and Schuster, 1989.
- Hesse, Douglas. "Cannon and Critical Thinking: An Inductive Teaching Strategy." English Journal Nov 1989: 15-22.
- Kidder, Rushworth M. "Academic Writing Is Convolutd, Jargon-Ridden, and Isolated From the Messy Realities of the World." The Chronicle of Higher Education 26 (1991): B1-3.
- Muldoon, Phyllis. "Challenging Students To Think: Shaping Questions, Building Community." English Journal April 1990: 34-40.
- Resnick, Lauren. "Literacy In School and Out." Educational Researcher 16 (1987) : 13-20.
- Snyder, Benson, "Literacy and Numeracy: Two Ways of Knowing." Daedalus Spring (1990): 233-255.
- Vaughan, Charlene Loughlin. "Knitting Writing: The Double-Entry Journal." Coming To Know. Ed. Nancie Atwell. Portsmouth: Heinemann, 1990.
- Zeiger, William. "The Exploratory Essay: Enfranchising The Spirit of Inquiry in College Composition." College English 47 (1985):454-465.